



WAD 00081 2917

FF# 3C

2/5/1993

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

February 5, 1993

RECEIVED
FEB 08 1993

RCRA PERMITS SECTION

FILE COPY

John Stiller
Burlington Environmental Inc.
2203 Airport Way South
Suite 400
Seattle, WA 98134

Dear Mr. Stiller:

Re: Proposed leak detection for double bottom tanks at the
Burlington Environmental Pier 91 facility

The Department of Ecology (Ecology) has reviewed Burlington Environmental's revised proposal regarding the leak detection system for the double bottom tanks at the Pier 91 facility. In general, Ecology finds Alternative 1, as described in your letter of November 10, 1992, to be preferable to the higher pressure alternative. This alternative proposal has addressed most of the questions raised by Ecology in my letter to you of October 23, 1992. However, Ecology still has a several concerns. Enclosed with this letter is a set of additional questions which addresses these concerns. As before, please respond as thoroughly as possible to these questions so that Ecology may evaluate the adequacy of the proposed system.

Should the response to the enclosed questions prove adequate, Ecology may agree in principle to the proposed alternative. If so, Burlington Environmental must still provide detailed facility designs, updated tank certifications, and revised facility procedures for the operation of the tanks and leak detection systems. Some of the changes to facility procedures which must be made are discussed in the last item (#7) of the enclosed comments. Ecology must review and agree to these designs, certifications, and procedures before agreeing to a formal settlement of this issue.

Now that the public comment period for the appeal has closed, Ecology can begin discussions with Burlington Environmental concerning this, as well as the other issues under appeal. I recognize that you may wish to review the enclosed questions prior to meeting with Ecology, so please call me at (206) 459-6993 at your earliest convenience in order to arrange a meeting and to discuss when Burlington can submit a response to the questions. I expect that the Port of Seattle and EPA will wish

USEPA RCRA



3012802

John Stiller
Page 2
February 5, 1993

to participate in these negotiations, so we should be prepared to coordinate with them as well. I look forward to hearing from you soon.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas Brown", with a large, sweeping initial "D".

Douglas Brown, Permit Writer
Hazardous Waste Permits

cc: Cathy Buller, Burlington Environmental
Dave Croxton, EPA Region 10
Doug Hotchkiss, Port of Seattle
Jay Manning, AAG/Ecology
Sue Roth, Kennedy/Jenks
Dean Yasuda, NWRO

enclosure

ENCLOSURE

The following are Ecology's comments on the revised proposal for the leak detection system for the double bottom tanks at the Pier 91 facility (Alternative 1), as submitted by Burlington Environmental on November 10, 1992.

1. The statements that the system does not involve any primary bottom flexing in either direction, or that the interstitial space will not be kept under pressure, appear to be in error. It appears that a static pressure difference of up to 23 inches of water could occur. This, together with the primary tank being empty, would exert significant upward pressure on the primary tank bottom. This upward pressure could cause bottom plate deflection or even a rupture. In addition, bottom plate deflection would cause the liquid level in the monitoring gauge to lower, possibly giving the appearance of a tank failure. Subsequent replenishment of water into the stand pipe would again increase interstitial pressure and possibly lead to tank bottom failure.

Burlington should demonstrate that the primary tank bottom (of the empty tank) will not deflect under the maximum possible standpipe hydraulic head. If the primary bottom will deflect under these conditions, Burlington must provide some means, such as the stud system in the earlier higher pressure proposal, for reducing possible deflection. In either case, prior to final Ecology approval, Burlington must provide new tank structural integrity assessment certifications for all tanks which will utilize this leak detection method (see comment 7).

2. Calculations provided for maximum gauge deflection are based upon the assumption that the maximum operating temperature is 100°F. However, the tank data sheets (attached to the facility permit) indicate operating temperatures for these tanks may be up to 210°F. Clarify which is the correct value. If 210° is correct, provide revised gauge deflection calculations based upon this higher temperature. If 100° is the correct value, this operating limit will have to be clearly specified in any revised permit agreed to by Ecology.
3. Burlington must provided further information concerning corrosion. The current corrosion certification in the Part B Permit Application assumes that the interstitial space is dry and will not contribute to primary tank bottom corrosion. The introduction of water will impact both the primary and secondary tank bottom corrosion rates. Discuss any measures envisioned to control tank bottom corrosion. Burlington must provide new tank corrosion integrity assessment certifications for all tanks which will utilize this leak detection method (see comment 7).

4. In order to help indicate the presence of small leaks Burlington should indicate that the interstitial water will be periodically sampled and analyzed for materials held in the tank. In addition, Burlington should describe the source of the pea gravel in the interspace, and identify any contaminants which may already be present.
5. Ecology is still concerned that water in the interstitial space or standpipe may freeze in winter. Will the contents of the tanks always be heated? If so, provide assurance that this will always be adequate to prevent freezing? If the tank contents are not always heated, provide assurances that other measures will be in place to prevent freezing.
6. Ecology is concerned that diffusion of water through the layer of mineral oil and subsequent evaporation will result in a gradual lowering of the water level in the monitoring gauge. Discuss how such a lowering would be distinguished from a leak. In addition, Ecology assumes that the standpipe will be covered so as to exclude precipitation. Provide assurances that this will be the case.
7. Should Ecology approve the concept of Alternative 1, Burlington must then provide updated tank structural and corrosion integrity assessment certifications (see comments 1 and 3). In addition, Burlington will need to provide detailed facility operational, inspection, and contingency procedures which account for the operation of the leak detection systems. These revised procedures must address the following:
 - Revised inspection procedures must clearly describe how the leak detection systems will be monitored. The procedures must specify the criteria which will result in the assumption of a tank leak. These criteria must take into account factors such as tank bottom deflection, temperature changes, and water evaporation. Schedules for all inspection and testing procedures must be provided.
 - Revised contingency procedures must clearly describe the actions which will be taken if a tank is suspected to be leaking. These must include taking the tank immediately out of service and notifying the Department pursuant to Permit Condition IV.B.1.
 - If the tank is indeed found to have been leaking, it must be assumed that dangerous waste has entered the interstitial space. The contingency plan must describe the procedures by which the space will be decontaminated before the tank can be put back into service. In addition, the requirements of Permit Conditions III.B.1. and IV.A.5. must be implemented before any leaking tank may be returned to service.